NATIONAL FROZEN FOOD ASSOCIATION, INC.

detailed findings

Supermarket FROZEN FOOD RESEARCH STUDY

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detailed findings

Supermarket FROZEN FOOD RESEARCH STUDY

Commissioned and published by

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Prepared by

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SECTION I
INTRODUCTION TO THE RESEARCH REPORT REASONS FOR RESEARCH REPORT NEEDED NEW INFORMATION FOR MANAGING FROZEN FOODS

INTRODUCTION

Frozen Foods have been one of the most dynamic supermarket departments during the last decade. Items available, items stocked, and space allocated to Frozen Foods have all increased the complexity of effective departmental management.

Rapid changes have been responsible for numerous management discussions and disagreements regarding many important dimensions of the Frozen Food Industry. Little current research information has been available to management; therefore, the needed insights into the many difficult decision areas faced by retailers, wholesalers, brokers, distributors, suppliers, and processors have generally not been available.

INDUSTRY CHANGES

The many changes that have occurred in the supermarket frozen food industry have raised numerous questions. Many of these questions have been either answered unsatisfactorily or left unanswered. Some of the changes have provided and will continue to provide significant industry implications. For example:

Sales Have Increased both in dollars and as a percentage of total store sales. Yet, to what extent can future sales increases be anticipated? Have frozen food sales reached a plateau or does a significant untapped sales potential still exist?

Gross Profit Margin fluctuations have raised many questions regarding the profitability of frozen foods. What profit margin level is needed to make frozens a breakeven department? A profitable department?

The Number of Items available has escalated at an exceedingly rapid pace. The expansion of frozen foods into completely different product lines has created substantial display and space problems.

Increased Consumer Variety Expectations have created new management challenges. The need to balance the retail product variety offering requires increased product performance knowledge and information.

Increased Consumer Quality Demands require processing and distribution emphasis upon quality control. Legislative actions regarding quality codes raised questions concerning the industry changes that would be necessary to meet proposed quality standards.

Changing Life Styles of today's consumers with smaller families and a high percentage of women working away from home have expanded the need for conveniently home prepared food products.

Micro-Wave Cooking has necessitated an evaluation of, and change in, industry packaging.

Energy Costs continue to rise thereby increasing departmental operating costs. Retailers, therefore, are seeking new information to answer questions regarding the relative merchandising and operating efficiency of alternative types of display equipment.

Equipment Alternatives are being closely reevaluated by retailers thereby creating new challenges for equipment manufacturers. Demands for more energy efficient yet effective merchandising equipment have required new design techniques to be utilized.

MANAGEMENT DECISIONS

The description of some of the changes impacting the Frozen Food Industry helps place in perspective management's need for timely information. Unfortunately, information of a specific nature to assist management in meeting the challenges created by change has not been readily available. Some of the important industry decision areas that would benefit from additional data include:

Space Allocation Decisions - The modern supermarket has been growing larger in size. There are more

departments competing for limited display space. Decisions regarding what percentage of total display area to allocate to the Frozen Food Department continue to be difficult because of unanswered questions regarding its contribution to store profits.

Variety Decisions - With limited display space, variety decisions in all departments are difficult. This is especially true in frozen foods because of the rapid expansion in the number of available items.

Processor presentation of new items to the retail trade supported by aggressive promotional and advertising programs, has created a complex decision situation. It is complex because of the need to evaluate the performance of currently stocked items against the performance potential of new items. This decision is often further complicated by the lack of adequate individual supermarket information on the performance of currently displayed products.

Pricing Decisions - Frozen foods have moved into the price competitive category in most supermarkets. Decisions to reduce gross profit margins in many instances have been made. The aggressive advertising of frozens near or below cost has further reduced gross profit margins. Therefore, management is seeking information on retail pricing flexibility for frozen foods and the gross profit margin required for breakeven and profitable frozen food departments.

Equipment Decisions - Manufacturers have been busy at the drawing boards, in the research laboratories, and on the production line creating new equipment alternatives to better meet the needs of the retailer. Yet, the equipment decision is most difficult. Some important decision factors include: customer demographics, store marketing strategy, store size, equipment capacity, stocking ease, equipment cost, and energy usage. These are only examples of some of the important decision variable that make the equipment decision complex.

Capital Expenditure Decisions - Frozen display equipment requires considerable investment per foot of display area. Furthermore, the cost of capital has been escalating. What is the return to capital investment in frozen food equipment? How does it compare with potential return to capital invested in other food store areas? Lack of information on the net profit contribution of the Frozen Food Department has created substantial uncertainty regarding capital expenditure decisions.

WHY THE RESEARCH

The last major research project on supermarket frozen foods was conducted nearly fifteen years ago. It was done on a relatively small sample of stores in a limited geographical area. Therefore given the rapid industry change, the age of the currently available research, and the important industry decisions required by management, the need for new research information on supermarket Frozen Food Department performance becomes apparent.

SECTION II
THE RESEARCH PROCESS

ADVISORY COMMITTEE

In preparation for the research project, representatives from F.M.I., Nargus, and the Frozen Food Industry were called together by the National Frozen Food Association to discuss the need for new research and some of the parameters for the research.

Advisory meetings to begin the project involved retailers, brokers, distributors and processors to be sure the objectives were on target to meet the major questions raised by the Frozen Food Industry.

OBJECTIVES OF THE RESEARCH

The primary objective of the research project was to provide information that would answer the question: "Are frozen food departments generating net profits for today's supermarkets?"

The specific objectives were:

1. To determine the sales and profit performance of frozen product groups.

2. To quantify frozen food departmental operating expenses.

3. To determine the net profit or loss of the frozen food department.

4. To identify opportunities for improving frozen food profitability.

RESEARCH PARAMETERS/CRITERIA

National Scope

The Advisory Committee wanted the information to be representative of regions as well as nation-wide. The decision was made to use the seven regions as defined in the "Progressive Grocer Marketing Book." Stores were to be selected from each region.

Research Period/Time Frame

The fall of 1978 was selected as the time for collecting the research data.

The Advisory Committee also defined two research periods. In the first period, the departments were monitored under existing conditions as they normally operate.

In the second period, selected stores would be chosen to promote the sales of frozen foods.

Utilize Independents and Chains

A criterium as defined by the Committee was to select both chain and independent conventional supermarkets. Seventeen chain stores and twelve independent stores participated in the study.

SEVEN GEOGRAPHICAL REGIONS

Volume Criteria

The research design also called for stores to be selected in four sales volume ranges. The average weekly total store sales ranges used in the research were: Up to $100,000; $100,000 to $150,000; $150,000 to $200,000; and $200,000 and up.

There were ten stores in the smallest volume category with three being independent and seven chains. There were seven stores in the second volume category with five being independent and two chain. There were six stores in each of the other two volume categories with two being independent and four being chains. (Exhibit II-1)

Exhibit II-1

Research Store Volume
Number of Stores

	All Stores	Independents	Chain
Less than 100,000	10	3	7
100,000 - 150,000	7	5	2
150,000 - 200,000	6	2	4
200,000 and More	6	2	4
	29	12	17

Cooperative Management

The Distribution Center and/or the chain office must agree to cooperate. The district store supervisor, the store manager, and frozen food department manager must also agree to cooperate in supplying the necessary information.

Research Group

The organization chosen to conduct the research project was Creative Management Institute. C.M.I. has been conducting research for training and merchandising of frozen food departments since 1967. They were commissioned to begin the project in the fall of 1978.

The Association of Independent Marketing Services, Inc. was selected by N.F.F.A. to provide the manpower to gather the in-store data. Fourteen brokerage firms affiliated with the AIMS Organization volunteered to participate in the project.*

The cooperating AIMS members selected the stores from which the data would be collected. Training sessions conducted by Creative Management Institute were coordinated in mid-September of 1978 for representatives of the brokerage firms.

Product Groups/Categories

The research Advisory Committee agreed to include 21 product groups, Exhibit II-2. It was to include fifteen (15) general frozen food categories. In addition, there would be three meat categories and three ice cream categories.

* A list of the participating AIMS members can be found in the Appendix.

Exhibit II-2

21 PRODUCT GROUPS

1) JUICES	6) MEAT
2) FRUITS	7) FISH
3) VEGETABLES—REG.	8) SPECIALTY SEAFOOD
4) VEGETABLES—SPEC.	9) POT PIES
5) POTATOES	10) DINNERS
11) PREPARED FOODS	17) NATIONALITY FOODS
12) DOUGH, ROLLS	18) MISCELLANEOUS
13) BREAKFAST ITEMS	19) ICE CREAM
14) PIES	20) SPECIALTY ICE CREAM
15) CAKES	21) ICE CREAM NOVELTIES
16) PIZZA	

There were two reasons for the all inclusive list of categories. First, to obtain a thorough study of the department all frozen food categories must be included. It was acknowledged that in some stores, frozen meat is in the meat department. Since they are frozen items prepared by processors, however, they should be included.

The second reason for the inclusive list was that all frozen items are battling for a given amount of frozen food cabinet and back room freezer space. Knowing how all product categories are performing is important information when making space allocation, product category location, amount of variety and other strategic merchandising decisions.

Product Item Movement

Since the study was to determine profitability of the categories and the total department, product item information became necessary. The only way to determine product category performance was to monitor item performance. Each item affects the success of every single category.

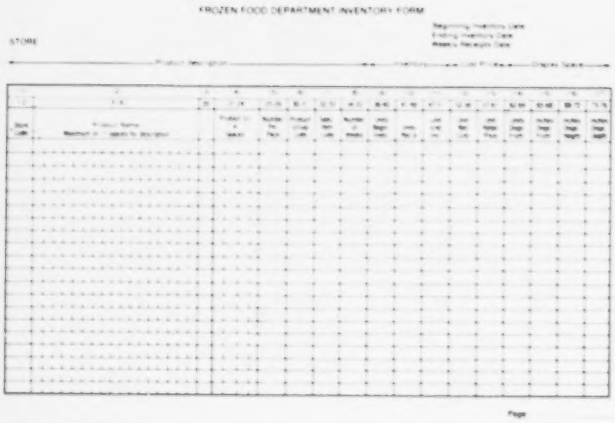
Total Department Performance

The primary purpose of the project was to develop total departmental profitability information. The Advisory Committee stressed the importance of generating total departmental performance data.

DATA TO BE COLLECTED/ DATA NEEDED FOR PROJECT

To meet the objectives of the project, it was necessary to collect considerable information in the research stores. Exhibit II-3 shows the inventory form used for collecting product item performance information.

Exhibit II-3



Item Sales

There were three parts involved in the process for determining item sales. First, a beginning inventory of the freezer cabinet and back room freezer for every item was taken. Second, a weekly record of units received was maintained, and third, an ending item inventory was done. Total amount of sales by item for the research period was determined by subtracting ending inventory from the sum of beginning inventory and units received.

Cost And Price

The net unit cost for each item was calculated and the retail selling price recorded.

Display Space Occupied

To determine freezer cabinet space performance, three exact space measurements were needed. These included: (1) the inches of display frontage for each item, (2) the inches of display height allocated to each item, and, (3) the inches of display depth. In addition, the number of units of display frontage allocated was recorded.

Promotional Information

During the second research period, some stores were selected to receive special promotional efforts. To monitor these results, it was necessary to count the weekly movement of these items receiving special attention.

Equipment Data

The specific types and make of equipment, both the display cabinets and back room freezer were collected. The total lineal shelving feet in each cabinet was measured.

Customer Shopping Patterns

On selected stores, customer shopping patterns were made to identify merchandising problems.

Departmental Expenses

Some of the supermarkets' expenses are directly chargeable to the frozen department. One of these expenses is the wages in frozen foods. The total number of hours used in the frozen food department times the averable hourly wage plus the percent of benefits per hour gave the direct chargeable labor dollars.

Depreciation for the frozen equipment in the sales area as well as the back room freezer was directly chargeable to the department.

Utilities used to operate the equipment based on utility rates and equipment specifications at the case and back room were calculated. The percent of the total store utilities that was used was charged to the frozen food department.

Two Research Periods

To determine results in each period, an ending inventory was made at the end of the first period. The ending inventory of the first period became the beginning inventory for the second period.

TOTAL STORE DATA

Store Sales

To determine frozen foods percent of total store sales and the percent distribution, it was necessary to obtain total store sales data.

Store Profits

To determine the percent of total store profits being generated by frozen food departments, data on total store profitability was obtained.

TOTAL STORE INFORMATION

To compare frozen food departmental contribution to the total store, additional information was necessary.

The total store square footage of selling area was needed to determine the percent of store space allocated to frozen food.

There were percentages of many total store expense factors that were chargeable to frozen foods. To determine these expenses, information was collected on (1) total front end labor expense, (2) management salaries, (3) total store energy usage (copy of the bill), (4) total dollars spent on advertising, (5) total rental expenses, (6) depreciation on front end equipment, (7)

maintenance costs, (8) price marking supplies and bag costs, and, (9) overhead expenses.

TYPES OF INFORMATION

The Advisory Committee agreed that data should be reported in several usable forms for the industry.

Frozen Food Department Performance-The department information was to be presented in total dollars and as a percent of total store. Analysis was to be made of dollar and percentage of Gross Profit Margins.

Expenses were to be calculated as dollars and as a percent of frozen food sales. The ratio of fixed to variable expenses was to be determined.

The Profit Or Loss was to be reported in dollars as well as a percent of frozen sales and as a percent of total store Net Profit Dollars.

The space allocated to the department was to be reported as a percent of total store selling area. A comparison of the sales percent to space percent was to be calculated.

By determing the **lineal shelving feet** for each department, a calculation could be made to determine sales and Gross Profits Per Lineal Foot Of Display Space.

Product category performance was to be presented as a percent of department weekly sales, as a percent of Gross Profit Dollars and the Percent Gross Profit Margin.

Each item was to be reported in terms of unit sales, dollar sales, percent of category sales, and percent of category Gross Profit Dollars.

The frozen food inventory was to be reported in terms of yearly turnover and average weekly dollars invested.

An evaluation of the top five categories performance was to be made on the basis of sales and Gross Profit Dollars. The number of items selling two units and four units or less per week was to be determined. The performance of private label in several major categories was to be evaluated.

A determination of **how customers were shopping** frozens was to provide information on weak and strong display areas. Some analysis was to be made of shelf level shopping and possible equipment barriers.

SECTION III
TOTAL DEPARTMENT PERFORMANCE

The first step in the analysis of total department performance involves an evaluation of departmental sales.

SALES PERFORMANCE

In the research stores, there was a wide variation in weekly frozen food sales. Table III-1 shows the range of dollar volume and the percent of research stores in each volume category.

Table III-1

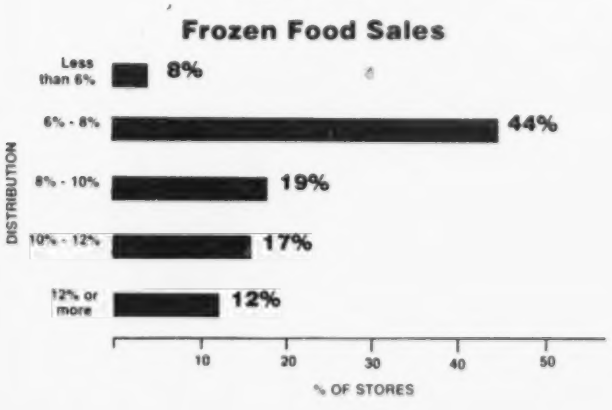
Frozen Food Departments
Range Of Dollar Sales

Dollar Sales Volume	Percent Of Stores
Up to 6,000	26.7%
6,000 to 9,000	16.1%
9,000 to 12,000	23.2%
12,000 to 15,000	17.8%
15,000 and Up	16.1%

Frozen food sales logically vary with total store sales. Therefore, another method of performance is to determine the percent of total store sales in frozen food. This method is often used to evaluate departmental performance.

Figure III-1 shows that a large portion of the stores had a six percent to eight percent distribution in frozen food sales. It is significant to note however, that forty-eight percent of the stores exceeded the eight percent or more distribution which has historically been a distribution bench mark for the industry.

Figure III-1



The food industry often compares the performance of Chain and Independent Stores. This chain-independent comparison in frozen food shows that the independents had sixty seven percent of their stores with more than eight percent of store sales in frozens while the chain stores had thirty-three percent of their stores in the eight percent plus contribution to sales category, Table III-2

Table III-2

Frozen Food
Department Distribution

	Independent	Chain
Less than 8%	33%	67%
8% or more	67%	33%

The all stores average frozen food distribution for independents was ninety-five percent and for chains it was eight percent.

Frozen Food has often been ranked relatively low in sales importance when compared to other departments. This latest research indicates that the Frozen Food Department may be the third or fourth largest supermarket department.

Grocery is the largest sales contributor with Meat Departments usually number two. The number three department contributor is usually Dairy.

The fourth largest contributor to store sales in most conventional supermarkets may well be Frozen Foods. It has pushed aside Produce, Bakery, Deli, and General Merchandise to become number four. In some stores it is even exceeding Dairy contribution thereby becoming the third largest department.

SPACE PERFORMANCE

Another measure of total department performance is the productivity that is generated from the space allocated to the department.

The space allocated to frozens in the research stores varied substantially. The greatest number of stores allocated six to ten percent of the total selling area to the Frozen Food Department. About twenty percent of the stores had more than ten percent of their space in

frozen foods while twenty-four percent had less than six percent.

The average percent of space allocated to Frozen Food Departments in the research stores was 7.8%. Independents allocated an average of 7.3% of space while chain stores allocated 8.2%.

It is interesting to compare sales and space to evaluate performance. Table III-3 indicates that the average frozen food - sales contribution for all stores was 8.7% and the space allocated was 7.8%. Differences in the space-sales relationship however existed between chains and independents. Independents were generating an average of 9.5% of stores sales in 7.3% of store space while chains were generating 8.0% of sales in 8.2% of space.

Table III-3

Sales - Space Comparison

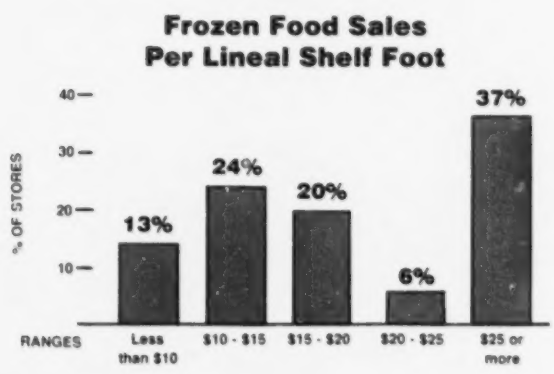
	Sales	Space
All Stores	8.7%	7.8%
Independents	9.5%	7.3%
Chains	8.0%	8.2%

SALES PER SHELVING FOOT

Another productivity measure is the weekly sales generated per shelving foot of cabinet space. This is an important measure especially in view of rising equipment and energy costs.

In the research stores only thirteen percent had sales per foot less than $10 per week, while thirty-seven percent had $25 or more. Figure III-2 indicates the ranges of sales performance per unit of shelving space.

Figure III-2



The comparison of performance between chains and independents shows independents with Sales Per Lineal Foot, Table III-4. Independents had sixty-eight percent of the stores in the $20 or more per foot category, while chains had only twenty-one percent of their departments generating $20 or more per week.

Table III-4

Weekly Sales Per Lineal Foot

	Independent	Chain
Less than $20	32%	79%
$20 or more	68%	21%

SALES PER SQUARE FOOT

A food industry measure of performance is sales per square foot of selling space. There was a wide range of performance in the Frozen Food Departments of the research stores.

In all the stores, Frozen Food Departments were generating $.83 cents or fourteen percent more per square foot than the total store average. The total store average sales per square foot was $5.99 while the Frozen Food Department was generating $6.82 sales per square foot, Table III-5.

Table III-5

Sales Per Square Foot

	Total Stores	Frozen Food Departments
All Stores	5.99%	6.82%
Independents	7.18%	9.03%
Chains	5.01%	5.02%

In analyzing the chain and independent stores, there were substantial variations in performance. The independent stores were generating $7.18 total store sales and $9.03 in frozen sales per square foot. The chain stores were generating $5.01 per square foot and $5.02 in frozen sales per square foot.

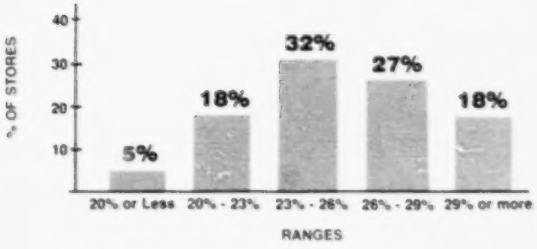
The range of frozen sales per square foot in the research chain stores varied from $1.68 to $11.34. The range in independent stores was from $1.95 to $16.67 sales per square foot.

GROSS PROFIT MARGIN

A question often discussed is, "What's Happening To Frozens' Gross Profit Margin?" A major factor affecting the profitability of Frozen Food Departments is the Gross Profit Margin level. The margin range in the research stores varied from 15.1% to 31.8%. The typical range was twenty-three percent to twenty-nine percent. The average Gross Profit Margin was 25.5%, Figure III-3.

Figure III-3

Frozen Food Department Gross Profit Margin



Chain and independent Gross Profit Margins for frozens varied little from the overall average with chains averaging 25.4% and independent stores 25.6%.

When Gross Profit Margin in the Frozen Food Department is compared to other departments, it performs very well. The Gross Margin in frozen food is higher than it is in most Grocery, Meat, Dairy, the other three large supermarket departments.

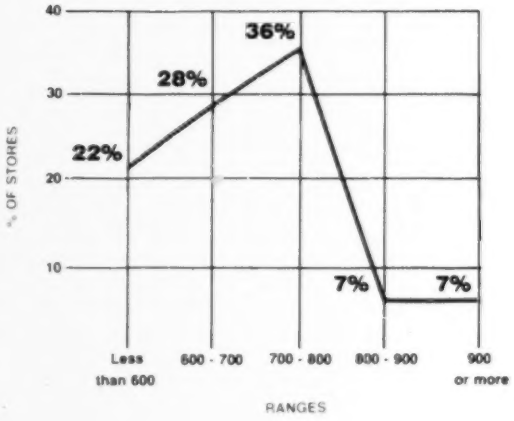
ITEM PERFORMANCE

Over the last few years, there has been an increasing number of items available to Frozen Departments. Broker Reps., Manufacturer Reps., and Distribution Centers are offering increased variety and selection in most every category.

In the research stores, the number of items carried ranged from a low of 481 to a high of 988 items. Twenty-two of the stores carried less than 600 items while fourteen percent of the stores carried more than 800 items, Figure III-4.

Figure III-4

Number Of Items Displayed



The majority of stores carried between 600 and 800 items. Analysis of chain and independent number of items stocked showed no significant difference.

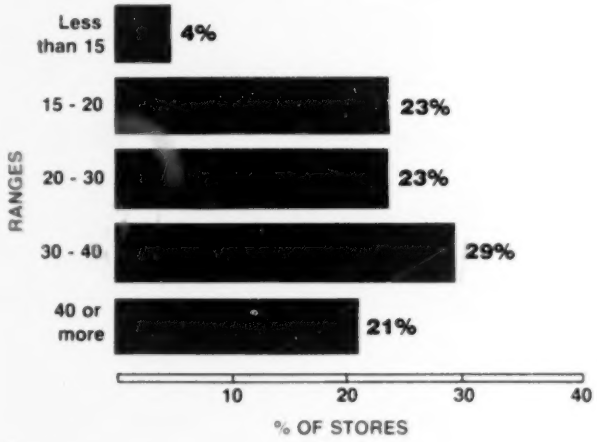
INVENTORY TURNOVER

Supermarket management is working to improve total store turnover. Certainly this is also an important consideration in the Frozen Department.

Twenty-one percent of the stores were getting forty or more inventory turns per year, Figure III-5. Twenty-seven percent of the stores however were achieving turns of less than twenty times per year. More than half the Frozen Food Departments were exceeding the total store average yearly turnover rate.

Figure III-5

Frozen Food Department Inventory Turnover



When comparing the performance of chain and independent stores, there were significant differences, Table III-6.

Table III-6

Yearly Inventory Turnover

Yearly Rate	All Stores	Independent	Chain
Less than 20	27%	12%	37%
20 to 30	23%	25%	22%
30 or more	50%	63%	41%

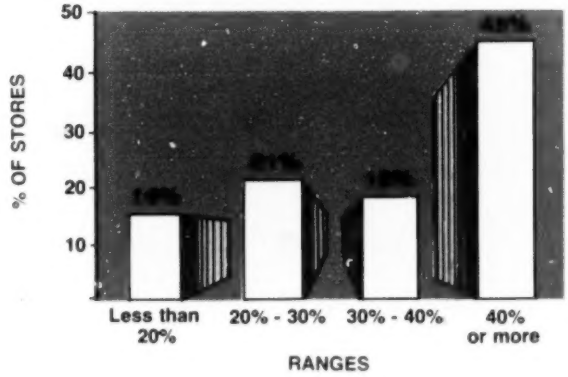
ITEM PERFORMANCE

The research project evaluated individual item performance. The purpose was to identify those items that might be reducing the turnover goals of some supermarkets.

It was determined that forty-five percent of the stores had forty percent or more of their items selling four units or less per week. This was true for both chain and independent stores, Figure III-6.

Figure III-6

Percent of Items Selling Four Units Or Less

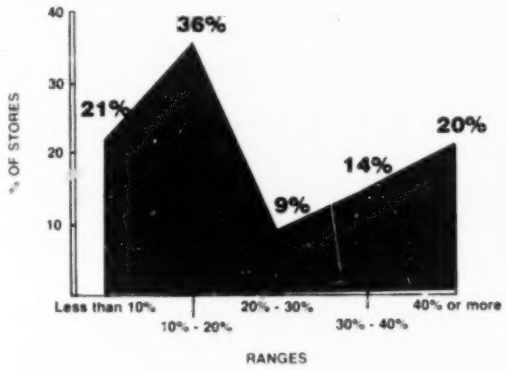


One store had eighty percent of the items moving four units or less, while another store only had fifteen percent of its items in the four or less category.

The number of items moving two units or less per week was also determined. One-third of the stores had thirty percent or more of their frozen items moving two units or less per week, Figure III-7.

Figure III-7

Percent Of Items Selling Two Units Or Less Per Week



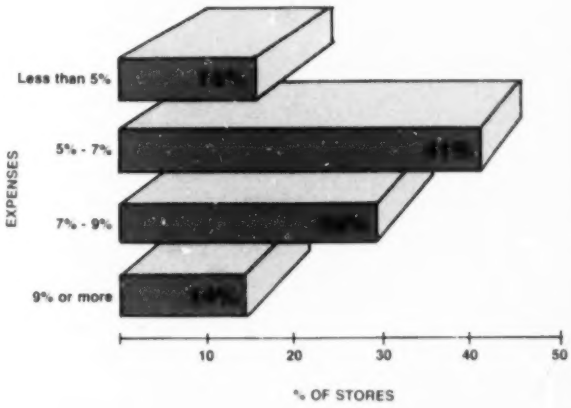
The management implications of these individual item performance data are significant for retailers, wholesalers, and processors and will be discussed in Chapter VIII.

DEPARTMENT EXPENSES

The Variable Expenses included: advertising, labor, and store supplies. These total expenses in the research stores typically ranged from five to nine percent of Frozen Food Department sales, Figure III-8.

Figure III-8

Variable Expenses % Of F.F. Sales

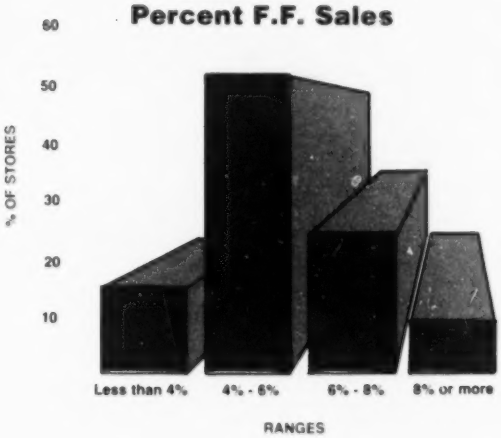


Labor was the largest variable cost item. Frozen food labor included the direct labor used for ordering, receiving, pricing, and stocking as well as a percent of Front End labor that was consistent with the department's sales distribution.

Labor costs ranged from three percent to thirteen percent of frozen sales. The factor most affecting this variable was the wage rate which varied from $3.00 to $12.00 per hour. The typical labor cost as a percent of sales in the research stores was 4.0% to 6%, Figure III-9.

Figure III-9

Labor Costs
Percent F.F. Sales



The labor percent in fifty-two percent of the stores was four percent to six percent of frozen sales. Note that this includes frozens' share of Front End labor.

FIXED EXPENSES

Fixed Expense items included: rent, depreciation, utilities, taxes, insurance, maintenance, and share of overhead expenses.

When the Profit and Loss Statements were computed, these expenses did not significantly change from week to week even though substantial changes did occur in sales volume.

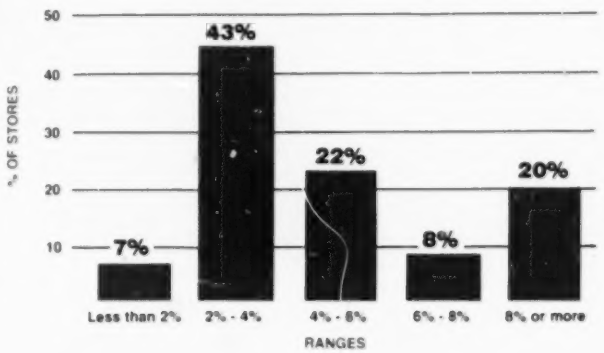
DEPRECIATION was calculated on all frozen food equipment including the back room freezer equipment. The percent of Front End depreciation, based on percent of sales, was also included. The typical depreciation range was from 1.0% to 2.0%.

UTILITIES were for most of the departments, the largest fixed cost factor. Calculating the exact amount of utility costs required research on the exact equipment specifications for all equipment and the total store utility bill.

The range of utility costs chargeable to freezers was just less than 2% to a high of more than 8%, Figure III-10.

Figure III-10

Utility Costs
Percent F.F. Sales



The typical utility cost range was between two and six percent with sixty-five percent of the research stores frozen food utility costs in this range. It should be pointed out that twenty percent of the stores had utility costs of eight percent or more of sales.

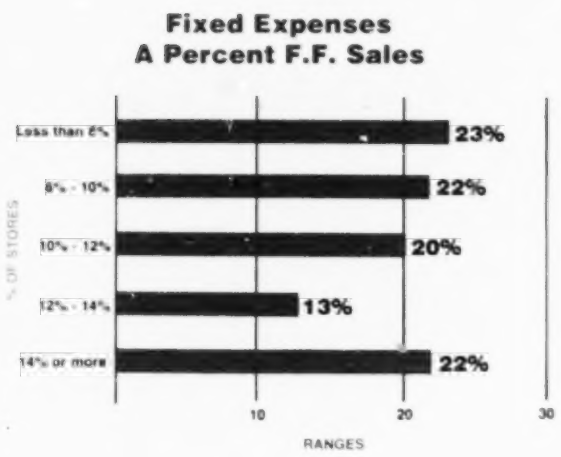
The question is often asked, "What percent of the total utility bill is in the Frozen Food Department?" These data varied from a high of forty-nine percent to a low of twenty-four percent of total store utility costs. The average costs were thirty-three percent of total store utility costs. The typical range was thirty percent to thirty-seven percent of the total bill.

TAXES AND INSURANCE costs were computed by utilizing property and other taxes plus total insurance costs. The ratio allocated to frozens was in direct relation to the percent of sales. The typical range was 1.0% to 1.5% of frozen sales.

MAINTENANCE was calculated by taking the total store maintenance costs and allocating the percent to frozens in relation to their sales percent. The typical range of these costs was 1.0% to 1.5% of sales.

SHARE OF STORE OVERHEAD expenses was in a few stores the highest single expenses category. Items in overhead included some management salaries and contribution to corporate offices and fees. The typical range was 1.5% to 2% of frozen sales.

Figure III-11



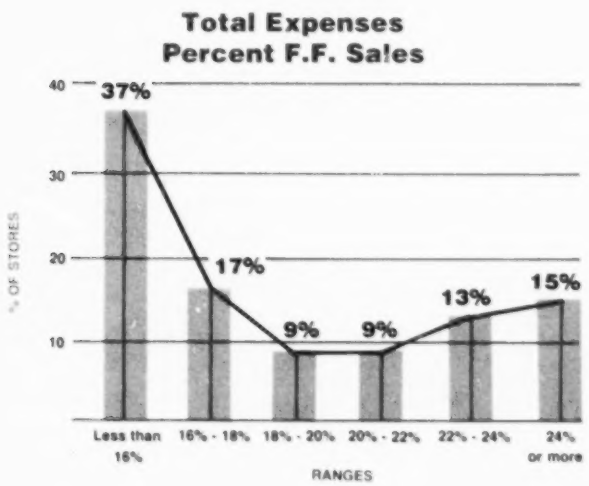
Fixed expenses varied greatly ranging from just less than eight percent to more than fourteen percent of frozen sales.

Twenty-three percent of the stores had fixed costs of eight percent or less of sales, while twenty-two percent had fourteen percent or more of sales in fixed expenses, Figure III-11. The typical range for fixed expenses was from eight percent to twelve percent of sales.

TOTAL FROZEN FOOD EXPENSES

When all the Variable and Fixed Expenses were totalled, there was a wide range in expenses as a percent of sales. The low was less than sixteen percent and the high was twenty-four percent or more, Figure III-12. Thirty-seven percent of the stores had total expenses as a percent of sales under sixteen percent.

Figure III-12



RATIO FIXED/VARIABLE

It is of value to examine the ratio of fixed to variable expenses. In the research stores, it was found that sixty-one percent of the total department expenses were fixed and thirty-nine percent were variable, Table III-7.

Table III-7

Ratio Of Expenses
Variable To Fixed

	Variable	Fixed
All Stores	39	61
Independents	43	57
Chains	37	63

The percentage of fixed costs for independent stores was fifty-seven percent or slightly lower than chain stores which had sixty-three percent.

This relatively high proportion of fixed costs provides management with tremendous opportunities for future profit increases when achievable frozen food sales increases are realized.

PROFIT AND LOSS STATEMENT was used as the format for computing the profit or loss of the Frozen Food Department.

RESEARCH COMPARISON

STORE NO

FROZEN FOOD DEPARTMENT
Profit and Loss Statement

INCOME
- Frozen Food Sales ..... $ ____
- Cost of Goods Sold ..... $ ____
- Gross Profit Dollars ..... $ ____

EXPENSES
- VARIABLE EXPENSES:
  - Advertising ..... $ ____
  - Labor ..... $ ____
  - Supplies ..... $ ____
  - Total Variable Expenses $ ____
- FIXED EXPENSES:
  - Rent ..... $ ____
  - Depreciation ..... $ ____
  - Utilities ..... $ ____
  - Taxes and Insurance ..... $ ____
  - Maintenance ..... $ ____
  - Frozen Foods Share of Overhead ..... $ ____
  - Total Fixed Expenses $ ____
- TOTAL EXPENSES FOR DEPARTMENT $ ____

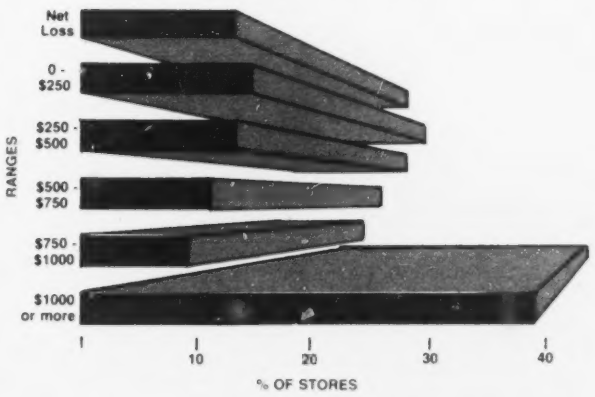
NET PROFIT OR LOSS ..... $ ____

PROFIT OR LOSS

Discussions are often held regarding whether frozens make or lose profits for the supermarket. The bottom line in this research project showed most stores in the profit position, Figure III-13.

Figure III-13

Net Profit Dollars Per Week



Eighty-seven percent of the stores were generating net profit dollars. Furthermore, nearly forty percent of the stores were generating $1,000 or more per week for the store.

There was about an equal spread of stores in each of the profit ranges with the exception of those above $1,000 per week.

Only thirteen percent of the stores had net loss departments. Substantial profits of $500 or more per week were being generated by fifty-nine percent of the stores.

Twenty-five percent of the independent stores were making less than $500 per week from frozens, while chains had fifty-four percent of their sales in this profit category, Table III-8. Seventy-five percent of the independent stores were making $500 or more per week from frozens compared with forty-six percent of the chain stores.

Table III-8

Frozen Food
Net Profit Dollars

	All Stores	Independents	Chains
Less than $500	41%	25%	54%
$500 or more	59%	75%	46%

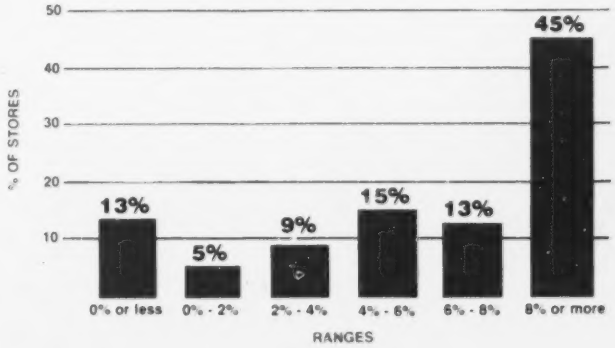
PROFIT TO SALES RATIO

Another method of evaluating profitability is profits as a percent of sales. The retail food industry has been experiencing a one to two percent rate of profit before taxes. "Is the Frozen Food Department contributing its fair share of profits to sales?"

Forty-five percent of the stores were generating net profits of eight percent or more on department sales, Figure III-14.

Figure III-14

Net Profit % Of F.F. Sales



Thirteen percent of the stores had net loss departments and just a few, five percent, had a zero to two percent profit to sales ratio.

Eighty-two percent of the Frozen Food Departments were exceeding the average net profit percentage of the supermarket industry.

When the performance of chain and independent Frozen Food Departments were determined, independents were achieving a higher net profit to sales percentage, Table III-9.

Table III-9

Net Profit % To Sales
All Stores - Independents - Chains

Percent Profit	All Stores	Independent	Chain
Less than 6%	48%	32%	62%
6% or more	52%	68%	38%

Research showed that sixty-two percent of the independents and thirty-eight percent of the chain stores were exceeding a six percent net profit to sales rate. Most supermarket Frozen Food Departments were very profitable.

SUMMARY

Since more than seventy-five percent of the Frozen Departments were exceeding the two percent profit to sales ratio, it can be concluded that overall profitability of the Frozen Food Department is quite good.

Independent stores were experiencing a higher net profit position than chain stores.

Frozens' expenses are slightly higher than total store expenses. However, the increased Gross Profit Margin adds many net profit dollars to the bottom line.

There are great opportunities, however, for even more improvements in the profit picture. Some of these profit opportunities will be discussed and detailed in Chapter VIII.

SECTION IV
FROZEN FOOD PERFORMANCE BY PRODUCT CATEGORY

A wide diversity of products are displayed in the supermarket frozen food department. They range from high demand items to products that are primarily unplanned, impulse merchandise. Management must therefore, not only be knowledgeable regarding total departmental performance but must also consider the productivity of individual items. This task has been complicated by the great number of new items that has been added to the department in recent years.

To help simplify this task, it is useful to classify the hundreds of frozen food items into a limited number of product categories. This permits similar products to be grouped together. The 21 frozen food product categories that were utilized in this study were identified in Chapter II.

Frozen food product performance by product category has been evaluated utilizing category sales performance, gross margin contribution, space productivity, and inventory performance data. The specific performance criteria for each of these general areas include:

1. Sales performance by product category.
   a. Average weekly dollar sales.
   b. Percent of total frozen food sales.
2. Gross margin contribution by product category.
   a. Average weekly dollar gross margin.
   b. Percent of total frozen food gross margin dollars.
   c. Percent gross margin.
3. Space productivity by product category.
   a. Weekly sales per cubic foot of display area.
   b. Weekly gross margin dollars per cubic foot of display area.
   c. Percent of total frozen display space occupied.
4. Inventory performance by product category.
   a. Yearly inventory turnover.
   b. Average dollar inventory investment.
   c. Percent of total frozen food inventory investment.

In addition to analyzing the average product category performance for the individual frozen departmental studies, this section will also discuss the category performance variations that existed among the researched stores.

CATEGORY SALES PERFORMANCE

The sales contribution of the twenty-one product categories is shown in Table IV-1.

Table IV-1

Frozen Food Sales Contribution
Twenty-One Product Categories

PRODUCT CATEGORY	Avg. Weekly Dollar Sales	Pct. Frozen Food Sales
Juices	$ 1,432	13.6
Ice Cream	1,196	11.3
Vegetables-Regular	802	7.5
Pizza	741	7.0
Specialty Prepared Foods	709	6.7
Meat	687	6.6
Specialty Ice Cream	546	5.2
Vegetables-Specialty	531	5.0
Fish	493	4.7
Dinners	421	4.0
Cake, Other Pastry	407	3.9
Pies-Fruit, Cream	390	3.6
Ice Cream Novelties	367	3.5
Potatoes	352	3.4
Miscellaneous	327	3.0
Specialty Sea Food	259	2.4
Nationality Foods	253	2.4
Pot Pies	200	1.9
Breakfast Items	191	1.8
Dough and Rolls	183	1.7
Fruit	83	0.8
TOTAL	$10,566	100.0%

Juices were the greatest category sales contributor as they generated 13.6% of departmental sales. This most important category was followed by ice cream with 11.3% of total frozen sales, regular vegetables at 7.6%, pizza with 7.0%, specialty prepared foods at 6.7%, and meat with 6.6%.

These six product categories, less than one-third of the total departmental product groups, generated an average of $5,567 sales per week, representing 52.7%

of total supermarket frozen food sales. The sales performance of the six most important categories can be compared to the six product groups that accounted for the smallest portion of department sales. These six categories generated average sales per week of $1,169 or only 11.1% of total departmental sales.

Data on frozen food unit sales by product category are shown in Table IV-2. Juices contributed 18.7% of the average total departmental unit sales. This was nearly fifty percent greater than the second greatest unit sales category, Regular Vegetables. The five categories with the greatest unit sales, Juices, Regular Vegetables, Ice Cream, Cake, and Specialty Vegetables contributed over fifty percent of total departmental sales.

Table IV-2

Average Frozen Food Unit Sales By Product Category

Product Category	Avg. Weekly Unit Sales	Pct. Unit Sales
1-Juices	2260	18.7%
3-Vegetables, Regular	1544	12.8%
19-Ice Cream	768	6.4%
15-Cake	745	6.2%
4-Specialty Vegetables	730	6.0%
11-Specialty Prepared Foods	710	5.9%
5-Potatoes	536	4.4%
16-Pizza	505	4.2%
18-Miscellaneous	505	4.2%
9-Pot Pies	482	4.0%
10-Dinners	465	3.9%
14-Pies	410	3.4%
6-Meat	375	3.1%
20-Specialty Ice Cream	373	3.1%
21-Novelties	337	2.8%
7-Fish	295	2.4%
13-Breakfast Items	289	2.4%
17-Nationality Foods	264	2.2%
12-Dough and Rolls	257	2.1%
8-Specialty Seafood	126	1.0%
2-Fruits	99	0.8%
TOTAL	12,075	100.0%

CATEGORY GROSS MARGIN CONTRIBUTION

The gross margin contribution of the twenty-one frozen food product categories is detailed in Table IV-3.

Table IV-3

Frozen Food Gross Margin Contribution by Twenty-One Product Categories

PRODUCT CATEGORY	Avg. Weekly Dollar Gross Margin	Pct. of Dept. Gross Margins	Pct. Gross Margin
Juices	$ 331.81	12.1	23.3
Ice Cream	299.67	11.0	25.0
Vegetables-Regular	229.88	8.4	28.7
Specialty Prepared Foods	195.97	7.2	27.6
Pizza	182.05	6.7	24.7
Meat	172.72	6.3	25.5
Vegetables-Specialty	143.63	5.3	27.0
Specialty Ice Cream	141.25	5.2	25.9
Fish	134.07	4.9	27.2
Cake, Other Pastry	107.67	3.9	26.5
Dinners	100.97	3.7	24.1
Novelties, Ice Cream	99.71	3.6	27.3
Pies-Fruit, Cream	99.00	3.6	25.7
Potatoes	98.24	3.6	28.0
Miscellaneous	83.94	3.1	26.3
Specialty Sea Food	71.95	2.6	27.9
Nationality Foods	68.43	2.5	27.2
Breakfast Items	51.65	1.9	27.2
Dough and Rolls	49.65	1.8	27.0
Pot Pies	48.88	1.8	24.4
Fruits	21.91	0.8	26.4
TOTAL-AVERAGE	$2,733.04	100.0%	25.9%

It is noted that few differences existed between the sales and gross margin contributions. The product groups that generated the greatest sales also contributed the most gross margin dollars. Juices contributed 12.1% of the total departmental gross margin dollars and was the only category to produce more than $300 weekly gross margin dollars. Other important gross margin groups in the department included Ice Cream with 11.0% of the total, Regular Vegetables at 8.4%, Specialty prepared foods with 7.2% and Pizza at 6.7%.

The six greatest gross margin categories contributed $1,412 toward the overall departmental total of $2,733. This is equivalent to 51.7% of the total. At the other extreme, the six categories generating the fewest gross margin dollars contributed only 11.4% of the departmental total.

The average percentage gross margin for the 57 departmental studies was 25.9%. There were only small variations from this overall average as the gross margin percentage for all but one product category was within + 2.5 percentage points from the total departmental average. The exception was Regular Vegetables which had an average gross margin of 28.7%.

CATEGORY SPACE PRODUCTIVITY

Frozen Food display space is the most expensive display area in the supermarket. Therefore, it is important to know those product categories that are the most and least productive users of the frozen display area. The productivity measures of weekly sales and gross margins per foot of display area occupied provide this information. These data are shown in Table IV-4.

Table IV-4

Frozen Food Space Productivity by Twenty-One Product Categories

PRODUCT CATEGORY	Weekly Sales Per Cubic Foot	Weekly G.M. Per Cubic Foot	Pct. of Cubic Display Space
Juices	$19.18	$4.45	6.6
Ice Cream	13.56	3.40	7.8
Meat	13.15	3.32	4.7
Specialty Ice Cream	12.13	3.14	4.0
Pizza	11.85	2.92	5.5
Seafood, Specialty	10.93	3.04	2.1
Fish	10.73	2.92	4.1
Specialty Prepared Food	9.15	2.52	7.0
Pot Pies	8.98	2.20	2.0
Vegetables, Regular	8.41	2.41	8.5
Pies-Fruit, Cream	8.25	2.11	4.1
Nationality Foods	7.50	2.03	3.1
Ice Cream Novelties	7.18	1.95	4.6
Dinners	6.95	1.67	5.4
Miscellaneous	6.88	1.78	4.3
Vegetables, Specialty	6.83	1.84	7.6
Cake, Other Pastry	6.19	1.64	5.8
Breakfast Items	5.94	1.61	2.9
Fruits	5.85	1.54	1.3
Potatoes	5.62	1.57	5.6
Dough and Rolls	5.50	1.49	3.0
AVERAGE TOTALS	$ 9.44	$2.44	100.%

Juices generated both the greatest weekly sales and gross margin dollars per foot of display area at $19.18 and $4.45 respectively. This productivity rate was approximately twice the departmental average of $9.44 weekly sales per foot and $2.44 weekly gross margin per foot. Furthermore, weekly sales per foot of $19.18 for juices was over forty percent greater than the productivity of ice cream, the second greatest space utilizer with weekly sales per cubic foot of $13.56. Other product categories that generated weekly sales per foot at a rate greater than the departmental average included meat at $13.15, specialty ice cream with $12.13, pizza at $11.85, specialty seafood with $10.93, and fish at $10.73.

Information on the percentage of total display occupied by each product category is also presented in Table IV-4. Five product categories occupied more than six percent of the total available frozen food space. These categories included regular vegetables with 8.5%, ice cream at 7.8%, specialty vegetables with 7.7%, specialty prepared foods at 7.0%, and juices with 6.7% of the space. Collectively, these product categories contributed over 44% of departmental sales and occupied about 38% of the freezer display space.

CATEGORY INVENTORY PERFORMANCE

Retail management has recognized for years that one key to improved profitability involves an effective inventory control program. The traditional measure of inventory performance has been inventory turnover. Yearly turnover data for the 21 frozen food categories are presented in Table IV-5.

Frozen Food Inventory Performance by Twenty-One Product Categories

PRODUCT CATEGORY	Yearly Inventory Turnover	Avg. Dollar Inventory Investment	Pct. of Inventory Investment
Specialty Ice Cream	52.9	$ 397.58	2.8
Ice Cream	47.1	989.42	7.0
Miscellaneous	37.7	333.35	2.4
Novelties, Ice Cream	35.7	389.48	2.8
Dough and Rolls	33.9	204.29	1.5
Juices	33.5	1,706.01	12.1
Potatoes	33.5	394.36	2.8
Pies-Fruit, Cream	33.4	453.42	3.2
Pot Pies	32.7	240.15	1.7
Vegetables, Regular	31.5	943.20	6.7
Pizza	29.0	1,000.76	7.1
Vegetables, Specialty	26.8	751.32	5.3
Breakfast Items	26.4	274.69	2.0
Meat	23.3	1,146.70	8.1
Specialty Prepared Foods	22.5	1,186.97	8.4
Dinners	22.2	748.20	5.3
Nationality Foods	21.4	449.20	3.2
Fish	21.0	886.95	6.3
Fruits	20.5	155.27	1.1
Cake, Other Pastries	20.0	777.93	5.5
Specialty Seafood	14.6	664.57	4.7
AVERAGE-TOTAL	28.9	$14,093.82	100.0%

Specialty ice cream and ice cream with respective turnover rates of 53 and 47 times annually, substantially exceeded the turnover rate of the other 19 product categories. Eight of the other product categories had an inventory turnover rate that exceeded 30 times year-

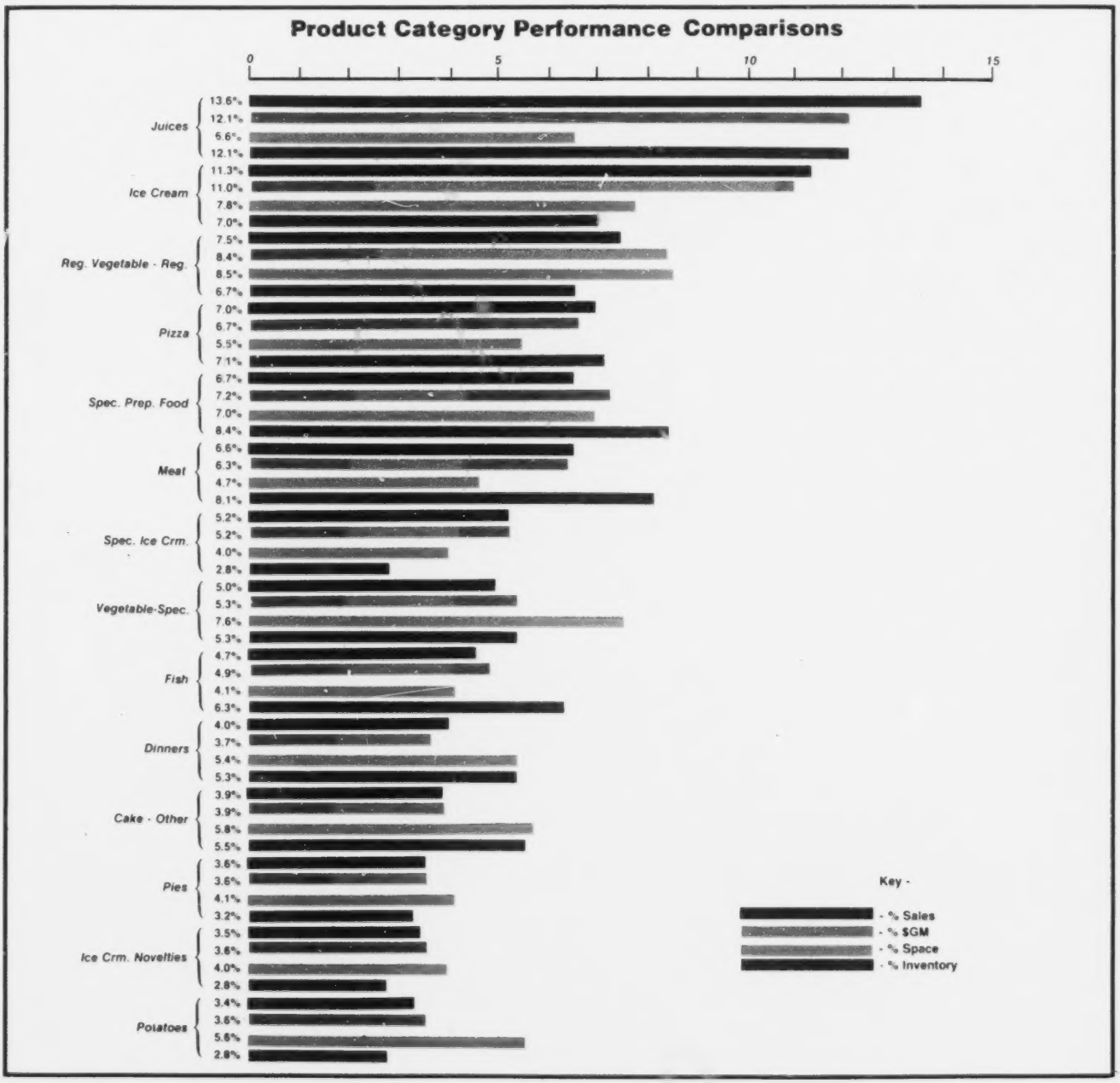
ly, compared to the total department turnover rate of 28.9 times. These included miscellaneous at 37.7, ice cream novelties with 35.7, dough and rolls at 33.9, juices and potatoes at 33.5, fruit and cream pies at 33.4, pot pies with 32.7, and regular vegetables at 31.5.

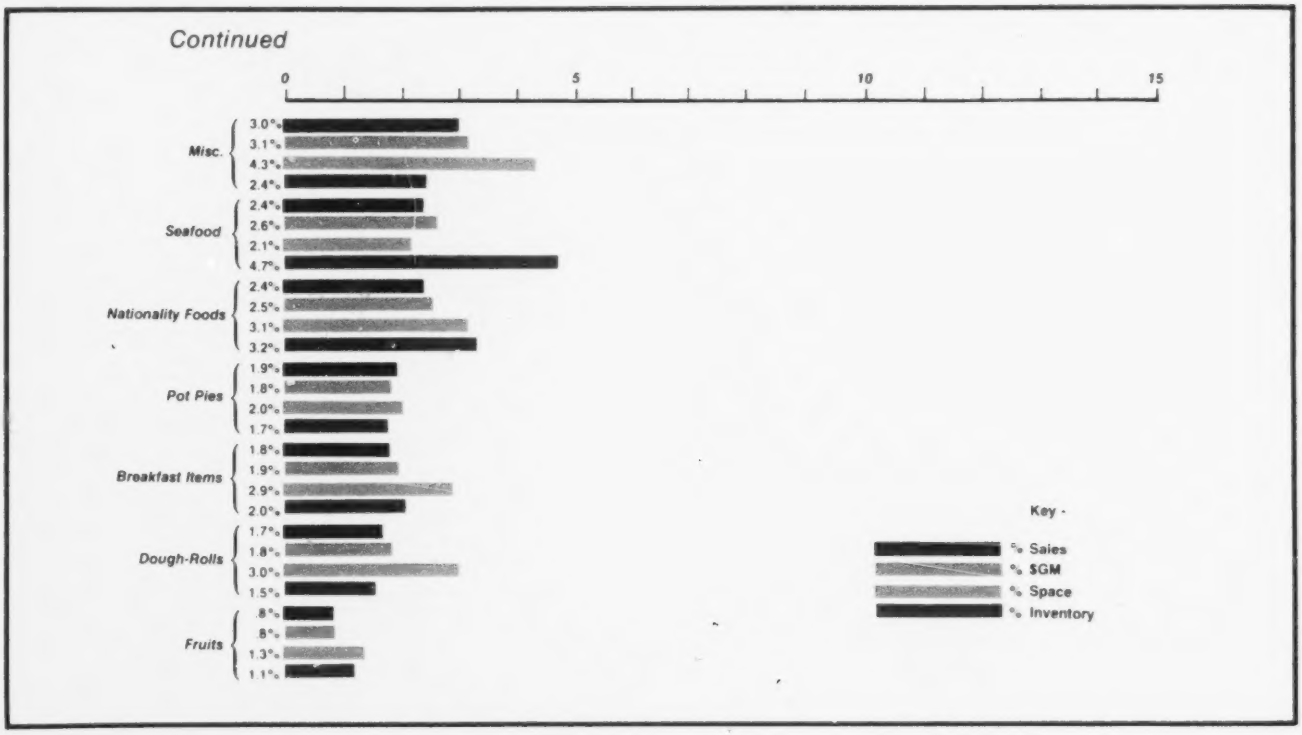
Data on average retail investment in frozen food inventory are also shown in Table IV-4. Seven product categories, one-third of the total groups, accounted for approximately 56% of total departmental investment. These high investment categories included juices, specialty prepared food, meat, pizza, ice cream, regular vegetables, and fish.

CATEGORY PERFORMANCE COMPARISONS

The performance comparisons of the 21 frozen food product categories are pictorially presented in Figure IV-1.

Figure IV-1





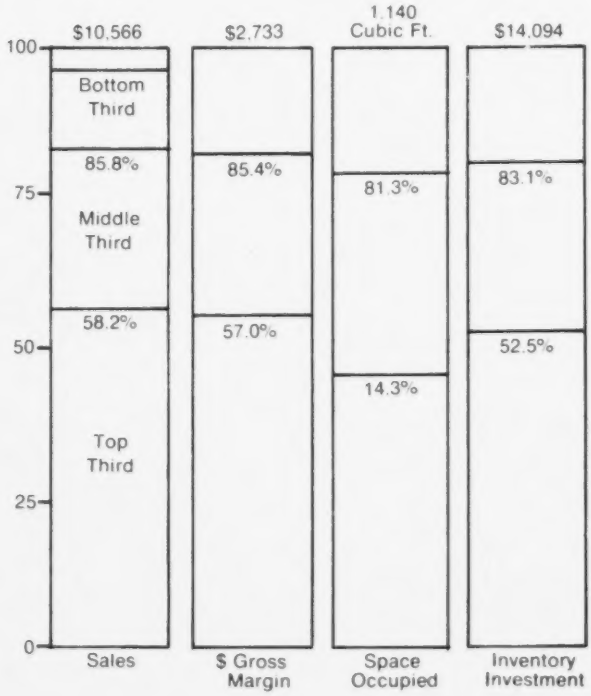
This information, arranged in descending order of category sales contribution, permits a quick performance comparison to be made among product categories. It also facilitates comparisons within a category based upon the percentage of sales and gross margin dollars generated, the percentage of space occupied, and the percentage of departmental inventory investment.

OVERALL CATEGORY PERFORMANCE

The importance of the greatest volume frozen food product categories and the relative unimportance of the lowest volume categories from the standpoint of their direct contribution to the department are shown by Figure IV-2.

Figure IV-2

Importance and Contribution to total Frozen Food Department Sales, Gross Margins, Space, and Inventory by Most Middle and Least Important Third of Department Product Categories.



The 21 product categories were divided into thirds based upon the seven groups with the greatest sales volume and the seven with smallest sales level. The percentage contribution of each third to total sales and gross margin dollars, the proportion of space occupied by each and the portion of total inventory in each third was determined. Comparing the top third which included juices, ice cream, regular vegetables, pizza, specialty prepared foods, meat, and specialty ice cream, with the bottom third showed:

	Top Third	Bottom Third
$ Sales	58.2	14.2
$ Dollar Gross Margin	57.0	14.6
$ Display Space	44.3	18.7
$ Inventory Investment	52.5	16.9

SECTION V
FROZEN FOOD ITEM PERFORMANCE

The performance of the overall frozen food department and the twenty-one product categories has been detailed. These overall performance levels are the summation of the individual frozen food items. It is therefore important to analyze individual item performance in the researched stores. Emphasis will be placed upon

a) The number of individual items displayed by product category.
b) The percentage of the items selling at the rate of
   - four units or less per week
   - two units or less per week
c) The overall contribution of the most and least important frozen food items.

ITEMS DISPLAYED BY PRODUCT CATEGORY

The average number of frozen food items displayed in the research stores was 693.9 or an average of thirty-three items per product category, Table V-1. The product category with the largest number of items was Specialty Prepared Foods with an average of 70.9 items. This represented 10.2 percent of the total departmental items. Other product categories with more than eight percent of the departmental items included Specialty Vegetables at 8.6 percent, Vegetables - Regular with 8.2 percent, and Cake and Other Pastry with 8.1 percent.

At the other extreme, the Fruits product category had the smallest number of displayed products, 12.1 items representing 1.7 percent of the departmental total. Other product categories with fewer than twenty items included: Pot Pies, Specialty Ice Cream, Dough and Rolls, Ice Cream, and Miscellaneous.

Table V-1
Avg. Number Of Frozen Food Items Displayed By Product Category

Product Category	Number Of Items	Percent Of Items
11-Specialty Prepared Foods	70.9	10.2%
4-Specialty Vegetables	60.0	8.6%
3-Vegetables, Regular	56.8	8.2%
15-Cake, Other Pastry	56.4	8.1%
10-Dinners	45.8	6.6%
1-Juices	38.6	5.6%
7-Fish	37.3	5.4%
14-Pies, Fruit & Cream	36.0	5.2%
5-Potatoes	34.6	5.0%
16-Pizza	33.0	4.8%
17-Nationality Foods	30.5	4.4%
6-Meat	29.5	4.3%
8-Specialty Seafood	22.1	3.2%
21-Novelties	20.8	3.0%
13-Breakfast Items	20.4	2.9%
18-Miscellaneous	19.7	2.8%
19-Ice Cream	19.4	2.8%
12-Dough and Rolls	19.0	2.7%
20-Specialty Ice Cream	17.3	2.5%
9-Pot Pies	13.7	2.0%
2-Fruits	12.1	1.7%
TOTAL	693.9	100.0%

FROZEN FOOD ITEMS SELLING AT SELECTED LEVELS

The productivity of the many items stocked in the supermarket Frozen Food Department can be measured in many ways. One approach involves an evaluation of the number and percentage of items selling at selected levels. This study analyzed the percentage of departmental and product category items that sold two or less units per week and that sold four or less units per week. The results are shown in Table V-2 and Table V-3.

Table V-2
Percentage Of Frozen Food Items Selling At Selected Levels Total Sample Average And Range

	Percentage Of Items Selling 2 or less/wk.	4 or less/wk.
Average - Total Sample	22.8%	38.9%
Average - Five Lowest Depts.	6.9%	15.5%
Average - Five Highest Depts.	50.4%	68.5%

Overall, 22.8% or nearly one-fourth of the frozen food items sold at a rate of two units or less per week. The percentage of items selling four or less units per week was 38.9% of the nearly forty thousand individual item observations. The item performance ranges around this overall sample average were substantial. As indicated in Table V-2, the five departments with the lowest percentage of items selling at these selected levels had an average of only 6.9% of their items selling

two or less units per week. These data can be compared to the averages for the five departments with the greatest percentage of items selling at these levels. In these departments, over one-half of the items sold two or fewer units per week and 68.5% sold four or less units per week.

The percentage of Frozen Food items selling at these selected levels was also analyzed by product group, Table V-3. Product categories having a significantly smaller percentage of low unit sales items compared to the overall departmental average included: Juices, Pot Pies, Vegetables-Regular, and Potatoes. Product categories with a substantially greater percentage of low unit sales items than the departmental average included: Cake-Other Pastry, Specialty Seafood, Pies, Fish, Meat, Fruits, and Specialty Ice Cream.

Table V-3
Percentage Of Frozen Food Items Selling At Selected Levels By Product Category

Product Category	Percentage Of Items Selling 2 or less/wk.	4 or less/wk.
1-Juices	7.1%	13.9%
2-Fruits	30.4%	46.7%
3-Vegetables, Regular	12.6%	22.5%
4-Specialty Vegetables	18.7%	34.0%
5-Potatoes	14.9%	28.0%
6-Meat	29.2%	48.1%
7-Fish	28.6%	49.8%
8-Specialty Seafood	36.2%	59.4%
9-Pot Pies	9.5%	15.7%
10-Dinners	21.3%	39.8%
11-Specialty Prepared Foods	25.4%	43.8%
12-Dough and Rolls	22.7%	38.0%
13-Breakfast Items	19.8%	32.8%
14-Pies, Fruit and Cream	33.3%	51.1%
15-Cake, Other Pastry	38.1%	59.2%
16-Pizza	17.9%	34.3%
17-Nationality Foods	24.7%	43.6%
18-Miscellaneous	20.7%	33.9%
19-Ice Cream	18.0%	32.9%
20-Specialty Ice Cream	31.1%	46.3%
21-Novelties	20.9%	35.6%
Average Total Department	22.8%	38.9%

MOST IMPORTANT ITEM CONTRIBUTION

A relatively small number of items in all supermarket departments contribute a major portion of direct departmental sales and profits. The importance of these items can be measured by determining the contribution of the ten percent of the items that generate the greatest dollar sales. The results of this analysis are shown in Table V-4.

Table V-4
Direct Contribution Of The Most & Least Important Frozen Food Items

Performance Measure	10% Most Imp. Items	50% Least Imp. Items
Percent Of Sales	50.3%	9.8%
Percent Of Gross Margin Dollars	47.3%	10.4%
Percent Of Space	18.1%	36.7%
Percent Of Inventory	21.6%	33.2%

The ten percent most important items on the average contributed 50.3% of departmental sales and generated 47.3% of total frozen food gross margin dollars. At the same time, these most important items occupied 18.1% of the departmental display space and accounted for 21.6% of the frozen food inventory investment. This importance of ten percent of the frozen food items was remarkably consistent across all of the researched departments.

CONTRIBUTION OF LEAST IMPORTANT ITEMS

A relatively large number of the items in all supermarket departments contribute a relatively small proportion of direct departmental sales and profits. This contribution can be measured by determining the collective importance of one-half, fifty percent, of the departmental items that produce the smallest dollar sales, Table V-4.

Fifty percent of the least important items on the average contributed 9.8% of departmental sales and 10.4% of the total gross margin dollars. Regarding display space, however, these items occupied 36.7% of the space. In addition, the fifty percent least important items accounted for 33.2% of total frozen food inventory investment. There was substantial consistency across the researched departments regarding the contribution of one-half of the least important frozen food items.

FROZEN FOOD ITEM PERFORMANCE CONCLUSION

The overall performance of any supermarket department is the collective contribution of its individual items. This chapter has analyzed selected aspects of individual item performance in supermarket Frozen Food Departments. Attention has been placed upon the number of items displayed by product category, number of items selling at selected rates, and the overall contribution of the most and least important frozen food items.

SECTION VI
PRIVATE LABEL PERFORMANCE

Private label products make an important contribution to the supermarket Frozen Food Department. This research study was not specifically designed to quantify the importance of private label frozen food items. It was possible, however, to identify the individual private label frozen food items in over one-third of the researched supermarkets. Based upon these data, the contribution of private label products to the Frozen Food Department and product category performance was determined.

PRIVATE LABEL PRODUCT CATEGORIES

Private label products were available to some extent in most of the twenty-one frozen food product categories. There were only four product categories, however, where these products represented a significant percentage of the total available category items. Therefore, the analysis of private label performance was limited to these categories which included juices, vegetables (regular), potatoes, and ice cream.

PRIVATE LABEL PERFORMANCE

The importance of private label product to the Frozen Food Department can be identified from the data in Table VI-1 where information is presented on the contribution of private label and manufacturer branded items to the juices, vegetables (regular, potatoes, and ice cream categories.)

Table VI-1
Private Label Performance To Frozen Food Department: Juices, Vegetables (Regular), Potatoes And Ice Cream Categories

	Juices	Vegetables (Regular)	Potatoes	Ice Cream
Percent Of Items				
Private Label	25.5%	51.1%	24.6%	37.3%
Mfg. Brands	74.5%	48.9%	75.4%	62.7%
Percent Of Dollar Sales				
Private Label	37.9%	61.7%	20.8%	49.5%
Mfg. Brands	62.1%	38.3%	79.2%	50.5%
Percent Of Unit Sales				
Private Label	40.8%	65.4%	24.6%	50.1%
Mfg. Brands	59.2%	34.6%	75.4%	49.9%
Percent Gross Margin				
Private Label	23.7%	30.8%	30.3%	25.3%
Mfg. Brands	24.0%	27.5%	30.3%	23.0%
Percent Dollar G.M.				
Private Label	36.9%	66.0%	21.5%	52.6%
Mfg. Brands	63.1%	34.0%	78.4%	47.4%
Percent Display Space				
Private Label	33.3%	58.1%	27.3%	48.7%
Mfg. Brands	66.7%	41.9%	72.7%	51.3%
Percent Inv. Investment				
Private Label	36.4%	60.4%	26.4%	47.7%
Mfg. Brands	63.6%	39.6%	73.6%	52.3%

JUICES: Private label juice items represented about twenty-five percent of total juice products, contributed thirty-eight percent of the juice sales and thirty-seven percent of the gross margin dollars, occupied one-third of the juice display space, and accounted for thirty-six percent of the juice inventory investment. The average gross margin for all private label juice items at 23.7% was nearly the same as the 24.0% gross margin average for manufacturer branded juice products.

VEGETABLES (REGULAR): Private label regular vegetable items represented slightly more than one-half (51.1%) of the category items. These items contributed 61.7% of the group dollar sales and 66% of the gross margin dollars. Private label regular vegetable items occupied 58.1% of the regular vegetable display space and accounted for 60.4% of the product group inventory investment. The average percent gross margin for private label regular vegetable items averaged somewhat higher than for manufacturer brands, 30.8% compared to 27.5%. Private label items in the regular vegetable category contributed the greatest amount to product group performance.

POTATOES: Private label potato items accounted for about one-fourth of the items in the potato category. These items contributed 20.8% of potato category sales and 21.6% of the gross margin dollars. Private label potatoes occupied 27.3% of the display space and accounted for 26.4% of the category inventory investment. The average gross margin percentage for private label potatoes at 30.8% slightly exceeded the 30.3% margin for the manufacturer branded items.

ICE CREAM: Private label ice cream items contributed about one-half of the category sales and 52.6% of the gross margin dollars. Private label ice cream items accounted for 37.3% of the category items, occupied 48.7% of the display space, and contributed 47.7% of the category inventory investment. The average gross margin percentage for private label ice cream at 25.3% was somewhat higher than the 23.0% for manufacturer branded ice cream products.

SECTION VII
PROFILE OF PROFITABLE FROZEN FOOD DEPARTMENTS

Many factors can be identified that impact the profitability of supermarket Frozen Food Departments. Examples include sales volume, sales distribution, percent gross margin, labor expense, inventory turnover, merchandising programs, etc. The research in twenty-nine U.S. supermarkets provided fifty-seven departmental profitability statements. Based upon this input, the following performance criteria can be identified that tend to distinguish among unprofitable, breakeven, profitable, and very profitable supermarket Frozen Food Departments. This profile can provide industry management with a quick method of comparing the performance of the Frozen Food Department with those in the research study resulting in a judgement regarding the current status of departmental profitability.

Frozen Food Department Profile

PROFITABILITY FACTOR	PROFITABILITY LEVEL			
	Unprofitable	Breakeven	Profitable	Very Profitable
1) Sales Distribution	<6%	6-7%	7-9%	>9%
2) Percent Gross Margin	<18%	18-22%	22-25%	>25%
3) Inventory Turnover	< 15	15-18	18-25	> 25
4) Sales Per Shelf Foot	<$10	$10-$15	$15-$25	>$25
5) Merchandising Program	Passive	Passive-Static	Aggressive	Very Aggressive

SECTION VIII
APPLICATIONS OF RESEARCH

The value of any applied research can be measured to some degree by the extent to which the data can be used as input for industry decisions. This chapter therefore, begins exploring the application of the research data to the food industry. It also includes some implications for manufacturers/processors, broker organizations, distribution centers and retail stores.

OBSERVATIONS

From the 39,552 individual item performance observations, several significant conclusions can be made.

FROZEN FOOD DEPARTMENTS PROFITABILITY

The research project quantified the profitability of frozen food departments. In the twenty-nine research stores, there were twenty-six that were generating net profit dollars.

Furthermore, fifty-nine percent of the stores had frozen food departments generating $500 or more net profit dollars per week.

PROFIT TO SALES RATIO

Eighty-two percent of the stores were generating net profits of more than two percent on sales. Forty-five percent of the stores had an eight percent or more net profit to sales ratio.

GROSS PROFIT MARGIN

Even though gross profit margin in frozen foods has declined over the last ten years, the gross profit margin is substantially higher than the margin for the overall supermarket.

In seventy-seven percent of the research stores, the gross profit margin was twenty-three percent or more. Forty-five percent were experiencing a twenty-six percent or more gross profit margin.

This higher gross profit margin is a major factor in the department's high net profit dollar contribution to store bottom line.

FROZEN DEPARTMENT EXPENSES

The departmental operating expenses were slightly higher than that of the overall store. The high energy usage and equipment depreciation costs escalated the expense factor.

Variable expenses, thirty-nine percent of the total were lower than fixed expenses which were sixty-one percent of total expenses.

Total expenses as a percent of sales were twenty percent or less in sixty-three percent of the stores.

SALES PER SQUARE FOOT

The sales per square foot in Frozen Food Departments at 6.82 per week exceeded the overall store average. Some of the departments were underequipped for the sales volume. Twenty-five percent of the departments were experiencing more than $10 sales per square foot in frozen foods. Forty percent of the departments were generating sales of less than $5 per square foot.

SALES OUTPERFORMS SPACE

The percent of store space allocated to the Frozen Food Department is in most stores less than the percent of sales. In twenty-five to forty percent of the research stores, it appeared that more display space was needed for frozen foods.

INVENTORY TURNOVER

Inventory turnover in frozen foods is higher than the overall store. Fifty percent of the researched departments were getting thirty or more inventory turns yearly.

TOP THIRD OF THE ITEMS

The top one-third of the items generate a majority of the sales and gross profit dollars. Careful attention should be given to these important products.

BOTTOM THIRD OF THE ITEMS

The bottom third of the items often take up more space than justified in terms of sales and profits. Some of these items may be needed for the variety to meet consumer needs. Some of these items may be deleted.

FROZEN FOOD ITEMS RESPOND

Frozen food items do respond very favorably to advertising and promotion. The stores that promoted

products in the second research period experienced significant sales and profit increases.

DESERVES MORE ATTENTION

The frozen food department deserves its fair share of management's attention. When store management concentrates some of its efforts to this department, sales and profits increase.

ALLOCATE HOURS

When scheduling labor, management should be sure to allocate specific hours to the frozen department for performing the necessary functions of ordering, stocking, merchandising, and promoting.

SALES INCREASES AND PROFITS

Sales increases do add substantial profits to the bottom line. Because of the high ratio of fixed costs, when sales increase, total expenses do not increase in the same proportion. Therefore, there is a major increase in profits.

EXAMPLE FROZEN DEPARTMENT

For example, when a frozen food department produces $10,000 weekly in sales at a twenty-five percent gross profit margin it generates $2,500 gross profit dollars. Subtract estimated variable costs of $900 and fixed costs of $1,300, and the bottom line of this department with high costs of operation and low gross profit margin yields a $300 weekly net profit.

TEN PERCENT SALES INCREASE

A ten percent sales increase at the same twenty-five percent gross profit margin means that sales will be $11,000 and gross profit dollars will be $2,750. Variable costs will also increase ten percent to $990 weekly, but fixed costs will remain essentially unchanged at $1,300. This makes total costs equivalent to $2,290 thereby yielding a net profit of $460 per week. Therefore, a ten percent sales increase generated a fifty-three percent ($460 compared to $300) increase in net profit dollars.

TWENTY PERCENT SALES INCREASE

The net profit impact of a sales increase can be further illustrated by assuming a twenty percent increase. The effect of a twenty percent sales increase on departmental profitability is dramatic. A twenty percent sales increase from $10,000 yields sales of $12,000 and provides $3,000 gross profit margin dollars. Variable expenses will increase by twenty percent to $1,080. Combining these variable costs with $1,300 fixed costs yields $2,380 total weekly costs and $620 weekly net profits. Therefore, a twenty percent sales increase generated a one hundred and seven percent increase ($620 compared to $300) in net profit dollars.

INDUSTRY IMPLICATIONS

The research project has implications for each segment of the frozen food industry. Industry effectiveness can be maximized when all segments understand and consider the implications of their decisions on all other marketing channel members.

The results of this research study provide a number of specific considerations for industry processors/manufacturers, brokers, distribution centers, and retailers if the potential of this important supermarket area is to be realized.

PROCESSORS-MANUFACTURERS

1) Processors have a need to understand the retail frozen food situation including the need for retail volume at an adequate margin. There are also retail space-display problems created by an excessive number of items.

There are direct manufacturer implications in the sales and profit importance of a relatively small percentage of the departmental items and the corresponding relative unimportance of a large number of items.

2) With the increased use of electronic check-out equipment which provides ready access to individual item movement data on an individual store basis, it will become increasingly difficult for processors to maintain distribution on marginal items. This suggests the possible need for a re-evaluation of manufacturer product deletion as well as new item introduction decisions and programs.

3) The retail profitability increases from increased sales volume indicates that manufacturers and retailers can both gain significantly from sales increases at a satisfactory margin. Therefore, manufacturer promotional efforts that are complete on items with good volume potential, not too restrictive, have adequate lead time, and are effectively communicated to the trade have high potential payback possibilities.

4) Manufacturer/processors need to consider all decision makers in communicating with the trade regarding new items, deletions, and promotional merchandising programs.

5) Resources are needed for in-store promoting and merchandising of frozen foods.

6) Frozen food profitability can be enhanced if sales reps are better trained to work with store supervision and management.

BROKERS

Brokers, as the sales representative of manufacturers-processors, also have the need to better understand the retail frozen food situation including the need for generating volume at an adequate margin. Consideration must be given to the space-display problems at retail. Since there is a high percentage of fixed costs, retail should be receptive to ideas from brokers reps for ways to increase sales thus improving the bottom line.

2) Brokers can often be instrumental in seeing that effective in-store promotional and signing programs are actually implemented at retail.

3) Effective communications with store management personnel on industry data and proven merchandising programs is another way that brokers can work in the marketing channel to help increase frozen food sales.

4) Research observations find a need for additional training for many brokers reps to improve understanding of the frozen food situation and communication with store personnel.

5) In presenting new items and promotional programs to distribution centers, reps should more effectively communicate with all major decision makers that affect their product.

DISTRIBUTION CENTER

1) The increased importance of the frozen food department and the profit potential from increased sales means that the distribution center must provide adequate and effective supervision for frozens.

This means increased emphasis must be placed on distribution center supervisors receiving adequate training in frozen food management and merchandising.

2) Frozen food display equipment is very costly. Therefore, the department can benefit substantially from space management programs that have been developed and implemented in many grocery departments.

3) Today it's critical for a store to know product movement by item and by category. The use of the information is for merchandising and promotion. Until scanning arrives, the distribution center can and should provide this important information.

4) An effective frozen food advertising and promotional program is a necessity if the department is to achieve its sales and profit potential. There is a need to carefully evaluate the number of items advertised, the type of items being advertised, follow through with signs and point-of-purchase, advertising markdown control, etc.

5) The need for adequate gross margins in frozen foods makes for a delicate balance between having competitive retail prices while not generating an unsatisfactory low margin.

6) The large number of new items available to the department and the limited display space places the distribution center in an important position regarding warehouse additions and deletions. Distribution centers can aid retailers with specific deletion recommendations and help them target their product mix for individual store demographics.

7) Because the department has been and will likely continue to be one of the most dynamic supermarket areas, distribution centers have the responsibility for effectively communicating significant changes to retailers and for providing leadership in retail frozen food departmental management training programs.

RETAILERS

1) Because of high fixed costs, net increases of the supermarket frozen food department increase substantially when sales increase. Therefore, retailers should focus departmental management activities around programs to increase sales while maintaining adequate gross margins.

In the appendix a profit and loss statement form with evaluations is provided, see Appendix B, that can be used by retailers to compute the profitability of their frozen food department.

2) A four point retail program for increasing frozen food sales and profits includes:

(A) *Respect the frozen food department* for what it is . . . A PROFIT MAKER. Management recognition of the importance, role, and potential of frozen foods in today's and tomorrow's supermarket is the first step in maximizing the department's contribution.

(B) *Retail personnel policies* have an important influence upon frozen food profitability. A departmental manager trained in ordering, stocking, merchandising, promotion, etc. is essential. The department should have sales, profit, and productivity goals established and plans of action to achieve the established objectives.

(C) *Scientific, creative, and effective merchandising* programs provide the third component of a retail management program designed to maximize frozen food profits. Specific merchandising areas that should be targeted for consideration include *product variety*, *space allocation*, and *departmental layout*.

- Balance Product Variety -

It is critical to have the appropriate items for one's customers, but it is also important to display no more items than can be effectively merchandised in the available display equipment. Evidence that management tends to stock unneeded frozen food products is very strong based upon the large number of items that sell two units or less per week.

- Scientifically Allocate Space -

Frozen food occupies the most expensive display area in the supermarket. Therefore, proper space allocation is essential for maximum profitability. Management must allocate enough space to the ten percent of the items that generate approximately fifty percent of the departmental gross profit dollars. Proper variety control is also a key component of proper space allocation.

- Strategic Departmental Layout -

Most retail merchandising managers are well versed on strategic self-service merchandising principles. Yet, research shows that often these principles are not being implemented in supermarket frozen food departments. Strategic layout can increase sales.

(D) *Effective advertising and promotional programs* are the fourth program ingredient for greater sales and profits. Frozen food items respond positively to aggressive media advertising and in-store promotional programs. An expanded and creative total promotional effort is needed for frozen food at retail.

SUMMARY

This research, the most extensive ever conducted on supermarket frozen foods, has quantified the net profitability of this important department. The facts are that eighty-seven percent of the departments were profitable and that seventy-five percent were earning profits at a rate exceeding two percent of sales. These data testify to the overall profitability of supermarket frozen food departments.

Yet, the opportunity to further improve the department's profitability is substantial. Given the high percentage of fixed costs in frozen foods, some sixty-one percent of total costs, the study illustrates that tremendous profit increases can be generated from expanding frozen food sales.

Therefore, the study results have suggested implications for all industry segments including processors-manufacturers, brokers, distribution centers, and retailers. Of particular importance is a four point retail management program for improving supermarket frozen food sales and profits.

APPENDIX A

RESEARCH INFORMATION GATHERED BY A.I.M.S.
The Association Of Independent Marketing Services
CHICAGO, ILLINOIS

1) Bancker-Nicholls Brokerage
2) H. C. Boerner Company
3) Brown, Moore, & Flint
4) C.B.S., Inc.
5) Hassco, Inc.
6) Budd Mayer Company
7) R. W. Mitchell, Inc.
8) R.M.I., Inc.
9) Associated Brokers of Tennessee
10) L. S. Sorem and Associates
11) Cook, Harms-LeBaron Company
12) Fenwick-Pickett, Inc.
13) The Folloder Company
14) Food Enterprises, Inc.

APPENDIX B

COMPUTE YOUR STORE'S FROZEN FOOD PROFITABILITY

1. **INCOME:** The first step is to determine the Gross Profit Income.

2. **SALES:** Enter average weekly frozen food sales.

3. **COST OF GOODS SOLD:** Enter the total average weekly purchases.

4. **GROSS PROFIT DOLLARS:** Subtract line 3 from line 2 to determine.

5. **EXPENSES:** There are two types of expenses: Variable and Fixed.

6. **VARIABLE EXPENSES:** These expenses change whenever dollar sales in frozen food change.

7. **ADVERTISING:** Determine the total average weekly dollars spent on total store advertising. Multiply this total by the percent of store sales that comes from frozen food. Enter the number on line 7.

8. **LABOR:** Determine total hours allocated for frozen food wages including benefits. Determine total Front End labor costs including fringes and multiply times the percent of store sales that comes from frozen food. The total of these two computations is the labor expense.

9. **SUPPLIES:** Take total Front End weekly bag costs and multiply the percent of total store sales in frozen. This gives you bag costs. If using labels, then multiply frozen food sales by .003 to determine pricing label costs. Add pricing label costs to frozen food share of bag costs to get a total supplies cost. Enter total on line 9.

10. **TOTAL VARIABLE COSTS:** Add lines 7, 8, and 9 to get the total Variable Costs.

11. **FIXED EXPENSES:** These expenses remain fairly consistent on a weekly basis.

12. **RENT:** Calculate the total space occupied for frozen food (include sales area and backroom storage). Divide the frozen food space into the total store space to determine the percent of space to the frozen department. Multiply the percent of space times store rent dollars to determine the rent allocated to frozen food department.

13. **DEPRECIATION:** Determine the actual average weekly depreciation for all frozen food equipment. Calculate based on frozen food sales distribution the percent of Front End depreciation costs that should be allocated to frozen food. These two figures combined should be entered on line 13.

14. **UTILITIES:** Calculating the exact amount of utility costs is the most complicated transaction. We therefore suggest you use the typical range on the reverse side or use the average. You may also get your store engineers to compute the actual energy used.

15. **TAXES AND INSURANCE:** Calculate by taking the total store property taxes and insurance costs and multiply by the frozen food department percent of total sales.

16. **MAINTENANCE:** Take the actual dollars that were spent on maintenance of the frozen food equipment and a percent of Front End equipment maintenance that is related to frozen food sales.

17. **OVERHEAD:** Take management salaries plus all other allocated overhead salaries and management fees and multiply by the frozen food department percent of total store sales.

18. **TOTAL FIXED EXPENSES:** Add items 12, 13, 14, 15, 16, and 17 to arrive at total fixed expenses.

19. **TOTAL EXPENSES:** Take items 10 and 18 and add to arrive at total expenses.

20. Subtract item 19 from number 4 to arrive at net profit. A negative figure would indicate a net loss position.

COMPUTE YOUR STORE'S FROZEN FOOD PROFITABILITY

	SAMPLE STORE		YOUR STORE		TYPICAL RANGES As A % Of F.F. Sales
INCOME					
Frozen Food Sales	$ 5,000		$		
Cost of Goods Sold	$ 3,650		$		
Gross Profit Dollars (27% GPM)		$ 1,350		$	23% to 29%
EXPENSES					
VARIABLE EXPENSES					
Advertising	$ 50	1.0%	$		.5% to 1.3%
Labor	$ 300	6.0%	$		4.0% to 6.0%
Supplies	$ 30	0.6%	$		.5% to .7%
Total Variable Exp.		$ 380		$	
FIXED EXPENSES:					
Rent	$ 87	1.75%	$		1.5% to 2.0%
Depreciation	$ 75	1.50%	$		1.0% to 2.0%
Utilities	$ 250	5.0%	$		2.0% to 6.0%
Taxes and Insur.	$ 62	1.24%	$		1.0% to 1.5%
Maintenance	$ 60	1.20%	$		1.0% to 1.5%
Share of Overhead	$ 85	1.75%	$		1.5% to 2.0%
Total Fixed Expenses		$ 619		$	
TOTAL EXPENSES		$ 999		$	
NET PROFIT OR LOSS		$ 351		$	

APPENDIX C

FROZEN FOOD DEPARTMENT INVENTORY FORM

Beginning Inventory Date _____
Ending Inventory Date _____
Weekly Receipts Date _____

STORE _____

← Product description → ← Inventory → ← Cost Price → ← Display Space →

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1-2	3-19	20	21-24	25-29	30-31	32-33	34-35	36-40	41-46	47-51	52-56	57-61	62-64	65-68	69-72	73-76
Store Code	Product Name Maximum of 17 spaces for description		Product Sz. 4 Spaces	Number Per Pack	Product Group Code	Spec. Item Code	Number of Weeks	Units Begin. Inven.	Units Rec'd	Unit End Inv.	Unit Net Cost	Unit Retail Price	Units Displ. Front	Inches Displ. Front	Inches Displ. Height	Inches Displ. Depth

Page _____

- EXPLANATION -

FROZEN FOOD DEPARTMENT INVENTORY FORM

The inventory form has been prepared to facilitate the collection of product performance research data. Please submit all data on these forms, because information is punched directly from the forms to computer cards for analyzation. Needed data can be divided into four basic areas as detailed below. There are a total of seventeen information pieces to be reported on the inventory form.

1. **Product (item) Description Information (Cols. 1-8)**

   a. Column 1 - *Store Code:* to assign each store a number that research is being performed, such as 01, 02, 03, etc.

   b. Column 2 - *Product Name:* for indicating the specific item being inventoried. Space is limited to 17 spaces so appropriate abbreviations need to be made. It saves valuable time to make these product abbreviations as short as possible. For example; Minute Maid Orange Juice might read, MM-OJ, or Birds-Eye Niblet Corn might read, BE-NIB-CORN. Private label product should read, PL - and whatever the product is.

   c. Column 3 - *Type of Display:* refers to the type of case in which the item is displayed. The following code should be used:

      1 = chest type display case
      2 = upright type display case
      3 = door type display case
      4 = portable spot display case

   d. Column 4 - *Product Size:* for reporting the item size. Again, abbreviations are required because only four spaces are provided. Examples include 10 oz. for 10 ounces, 10 ct. for 10 count, 1 lb for 1 pound, etc.

   e. Column 5 - *Number Per Pack:* refers to the number of sales units at the retail store which the supplier ships as one ordering unit.

   f. Column 6 - *Product Group:* refers to the appropriate product group within the Frozen Food Department to which the item belongs. See the product group listings for Frozen Food that are located in this explanatory brochure.

   g. Column 7 - *Special Item:* for indicating when an item has been specialed during the inventory period. Each item that was on special should have a code entry on the inventory form, and also be listed on a *separate* form indicating its information during the time it was specialed. On the separate form, the beginning inventory must be counted on all specialed items. In addition, all receipts of specialed items must be indicated and added to beginning inventory to reflect the total available for sale. At the end of the promotional period, an ending inventory by item must be taken to subtract from the total available for sale to indicate the total sold at special. The following code should be used:

      1 = advertised sale item
      2 = in-store promotions
      3 = manager's special/close-out
      4 = store coupon item
      5 = service promotion (sampling)
      6 = buy one get one free

h. Column 8 - *Number of Weeks:* refers to the number of weeks involved in the study period. If the study duration is four weeks, the number 4 is entered in this column.

2. **Inventory and Product Receipts Data (Cols. 9-11)**

i. Column 9 - *Unit Beginning Inventory:* for reporting the number of individual units of each item in the Frozen Food Department at the beginning of the study period. One must be sure to include both the display inventory and the inventory of any items in reserve freezer stock.

j. Column 10 - *Units Received:* for reporting the number of units received during the inventory period. It is important that this figure include not only total receipts, but also that appropriate adjustments are made for products that might be returned to their supplier. Unit receipts should be picked up *at least every week*.

k. Column 11 - *Units Ending Inventory:* for reporting the number of units of each individual item in the Frozen Food Department at the end of the study period. Again, both the display and reserve stock count are to be reported.

3. **Cost and Price Data (Cols. 12-13)**

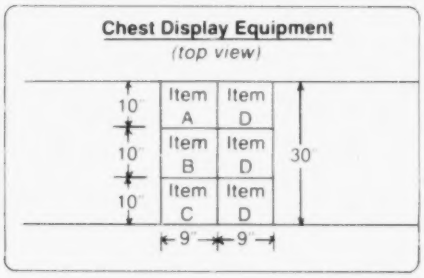
l. Column 12 - *Unit Net Cost:* for reporting the net unit cost of each item. Be sure that the cost figure represents the net cost of the item after all discounts and that it is reported on a *per unit basis*.

m. Column 13 - *Unit Retail Price:* for reporting the retail price received for each unit sold. Again, this should be reported on a *per unit basis*, that is .245 not 2/49¢.

4. **Display Space Information (Cols. 14-17)**

n. Column 14 - *Units Display Frontage:* for reporting the number of display frontage units exposed to the shopper and may be considered synonymous with facings.

o. Column 15 - *Inches Display Frontage:* for reporting the number of horizontal inches of display frontage occupied by the item. It is suggested that all space measurements be reported to the nearest one-half inch. The important measurement here is the number of inches of display frontage facing the customers as they shop.



p. Column 16 - *Inches Display Height:* for reporting the number of vertical inches of product display height. In multi-shelf displays, this measure is equivalent to the distance between shelves. Again, the important measure is the number of inches of display height facing the customers as they shop. For top shelf items, utilize a typical display height measurement.

q. Column 17 - *Inches Display Depth:* for reporting the number of inches of display depth into the case. For example, in a freezer display case, how deep is the product stacked in inches.

APPENDIX D

PRODUCT PERFORMANCE - SPACE AND INVENTORY EVALUATION BY PRODUCT

540 SQ. FT. FRONTAGE

	PRODUCT PERFORMANCE				SPACE EVALUATION				INVENTORY EVALUATION		
	AVG WEEKLY DOLLAR SALES	PCT DEPT SALES	DOLLAR GROSS MARGIN	PCT GROSS MARGIN	PCT 1/ TOTAL DOLLAR GROSS	PCT 2/ SQ FT DISPLAY FRONT	WEEKLY SALES SQ FT FRONT	WEEKLY GROS MARG SQ FT FRONT	AVG DOLLAR INV INVEST	WEEKLY INV TURN 3/	GROS 4/ DOLLAR RETURN INV INVES
FROZEN FOODS	4380	100.0	1059.39	24.2	100.0	100.0	8.11	1.96	7258.27	.5	14.6
14 PIZZA	781	17.8	196.30	25.1	18.5	5.9	24.47	6.15	1092.97	.5	18.0
10 DINNERS	656	15.0	128.86	19.7	12.2	14.7	8.28	1.63	596.44	.9	21.6
17 ICE CREAM & ICE MILK	483	11.0	133.16	27.6	12.6	7.4	12.13	3.35	392.11	.9	34.0
03 VEGETABLES	388	8.9	106.39	27.4	10.0	13.6	5.28	1.45	1570.38	.2	6.8
01 JUICES & DRINK	360	8.2	76.65	21.3	7.2	2.9	22.83	4.86	624.16	.5	12.3
06 FISH	260	5.9	62.97	24.2	5.9	5.9	8.23	1.99	220.19	.9	28.6
13 OTHER PASTRY	214	4.9	53.03	24.8	5.0	13.3	2.97	.74	493.76	.3	10.7
04 POTATOES	210	4.8	53.53	25.5	5.1	4.9	7.99	2.04	172.71	.9	31.0
05 FROZEN MEAT	209	4.8	51.32	24.6	4.8	4.9	7.90	1.94	507.55	.3	10.1
19 NOVELTIES	117	2.7	37.65	32.1	3.6	2.5	8.67	2.79	65.32	1.2	57.6
12 PIES	101	2.3	25.91	25.7	2.4	6.7	2.78	.71	283.49	.3	9.1
09 PREPARED FOODS	93	2.1	21.23	22.8	2.0	2.2	7.86	1.80	277.19	.3	7.7
08 POT PIES	91	2.1	3.41	3.7	.3	1.8	9.18	.34	256.42	.3	1.3
07 SEA FOOD	74	1.7	18.23	24.7	1.7	1.2	11.57	2.86	115.55	.5	15.8
11 DOUGH-ROLLS-WAFFLES	73	1.7	20.19	27.5	1.9	2.9	4.68	1.29	92.85	.6	21.7
18 PREMIUM FROZEN DESSERTS	68	1.6	21.89	32.0	2.1	3.0	4.19	1.34	42.53	1.1	51.5
15 NATIONALITY FOODS	65	1.5	15.75	24.2	1.5	2.7	4.42	1.07	158.31	.3	10.0
20 WHIP PRODUCT	55	1.3	12.81	23.3	1.2	1.1	9.31	2.17	51.39	.8	24.9
02 FRUITS	48	1.1	13.38	28.0	1.3	1.5	6.01	1.68	127.97	.3	10.5
16 MISCELLANEOUS	34	.8	6.73	19.9	.6	1.0	6.54	1.30	116.93	.2	5.8

APPENDIX E
TRAFFIC FLOW SURVEYS

A traffic flow survey will help show the traffic pattern in your store's Frozen Food Department. It will indicate such things as areas that do not get shopped frequently, areas that have only high volume, and if customers are shopping the entire Frozen Food Department.

High traffic areas are created primarily for the following two reasons:

1. The layout in the store will naturally direct customers into the department.

2. Demand items attract customers to a certain spot such as ice cream.

Once you determine the "hot spots" in your case, you will then be able to disperse the fast selling items to help facilitate traffic flow throughout the department.

CUSTOMER SHOPPING PATTERN DIAGRAMS

Knowing how customers shop in self-service situations is a prerequisite for effective merchandising. Shopping pattern analysis is a management tool that can be used to determine how effectively a Frozen Food Department is currently being merchandised.

The following explanation details how shopping patterns can be generated for a Frozen Food Department.

A. Make a diagram of the Frozen Food case and the Frozen Food aisle indicating where various product categories are located. (See next page) Study should be done on a Thursday, Friday, or Saturday.

B. Stand and observe customers as they shop the Frozen Food aisle and draw their path on the aisle diagram. Only record customers with a shopping cart.

C. Record customer purchases with an "X" or a dot in the appropriate place. Record product inspections without a purchase with an "O".

D. If a customer leaves the shopping cart, indicate the path with a dotted line.

E. After observing approximately 50 shoppers, make a master diagram of the Frozen Food case. Indicate all purchases with X's or dots.

F. Try to avoid detection by the customer. If you are detected you may not get a true customer shopping pattern.